Field Report No. 2

Notes on

Clinical Simulations

for the

Problem Oriented Medical Curriculum

at Sheppard Air Force Base

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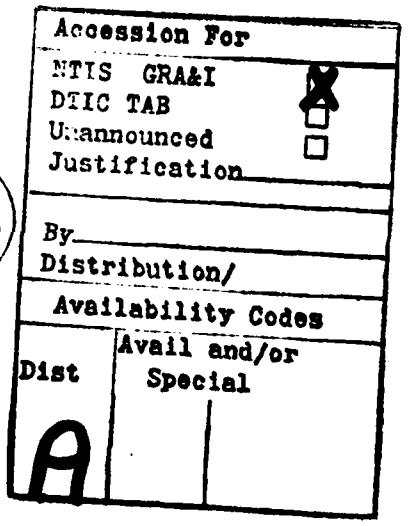
Introduction

The attached set of patient management problems was prepared for testing students in the physicians' assistant program at Sheppard Air Force Base. The staff at Sheppard had implemented a Problem Oriented Medical Curriculum on the PLATO IV computer-based education system, and decided to use clinical simulations rather than traditional test items in assessing program results. This curriculum development for CAI materials was undertaken as part of a military field trial for PLATO.

Sheppard staff requested assistance from Educational Testing Service in developing patient management problems. Such problems rely on simulations of actual experiences to portray the complexity of real situations and measure skills in higher-order reasoning. Rather than a collection of independent questions, written simulations present the test taker with descriptions of several realistic situations. These situations might correspond to the conditions of an initial patient encounter or a urgent call for medical assistance. A series of test items would accompany each description. The items themselves require a physicians' assistant to choose among several alternative actions; thus the items represent decision points in moving toward problem solution. In a linear simulation all test takers would be required to follow an identical sequence of questions, regardless of the decisions made earlier in the problem.

Another type of written simulation would branch to decision points dependent on prior choices of an appropriate action. Such branching simulations really call for a series of interdependent steps, much as the action taken by a physicians' assistant affects the circumstances which dictate subsequent decisions. It is then possible to model the interdependent, sequential decisions involved in a real situation. The series of decisions made by an individual test taker may lead to successful problem solution or to the termination of the problem due to the consequences of inappropriate actions. It is the fidelity of branching simulations to actual clinical situations which makes them especially attractive for testing the practical preparation of physicians' assistants.



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Representatives from ETS visited Sheppard AFB (7 October 1975) so as to acquaint the staff with the procedures involved in developing patient management problems. A subsequent site visit (9 December 1975) concentrated on reviewing a draft problem. The initial set of problems, attached here, still require some attention. This is not so much a function of their quality as it is a result of the developmental stage at which the problems now stand.

Development

There should be four stages in the development of patient management problems: 1) introductory workshop; 2) revision session; 3) final selection; and 4) score assignment. In effect the ETS trip to Sheppard AFB last October served as the introductory workshop. Sheppard's experience with computer simulations and their professional qualifications reduced the burden of introductory remarks and enabled us to concentrate on the attributes of written simulations. At that time the senior examiner from ETS recommended that Sheppard consider developing problems on respiratory disease as well as another field. This would facilitate some balance between materials specifically addressed by the POMC and materials for which students had no prior exposure to simulation exercises. It would also serve as a check on the transfer of skills promoted in the POMC to other situations. Since experience would lead us to expect that some draft problems would fail to satisfy all criteria for written simulations, it was also suggested that Sheppard prepare a pool of potential exercises for review, perhaps twice the number of exercises required for testing. As a further check against possible bias, the POMC staff might prepare a given number of problems, and instructors from regular classes would prepare an equivalent number of problems.

The second stage in developing patient management problems should be a revision session. This session would concentrate on refining and polishing the problems. Each simulation must satisfy certain criteria:

-- the initial problem description must be realistic and the information presented must conform with that revealed in actual conditions.

-- it must require a series of sequential, interdependent decisions.

-- the test taker should be able to obtain information on the effects of his decisions as a basis for subsequent action.

-- it should be impossible to retract a decision with undesirable consequences.

-- the problem must enable test takers to pursue different approaches to patient management, especially alternatives for reaching a satisfactory solution.

-- it should be possible to complete the problem, either through successful management or forced physician intervention, in a variety of ways.

A draft problem was submitted to ETS for review in advance of a second trip to Sheppard AFB. The results of that review indicated that extensive revisions to problem format would not be necessary. It was evident that the Sheppard developers understood and could meet the essential criteria for branching simulations. Several recommendations with regard to the use of natural problem constraints (e.g., forced physician intervention or problem termination due to patient mismanagement) and consistency in editorial style and directions were set forth as guidelines for the preparation of additional simulations. It was agreed that revisions to other problems and the final selection from the pool of draft versions should be compressed into one stage in order to expedite further development.

Due to the innovative, and hence uncertain, nature of the POMC as well as the importance of training to candidates for physicians' assistants, there was a projection for an enrollment in the POMC which would be insufficient to justify a comprehensive and conclusive field trial. This decision to curtail the scope of PLATO activities at Sheppard AFB also affected plans for completing the patient management problems. In final selection weights were to be assigned to the alternatives available at each decision point. If a consensus among the problem's developer and two other members of the physicians' assistant program could not be reached, that option would be reworked or the entire exercise removed from consideration in the event of repeated disagreements. The reviewers' weights assigned to a given option should be within one point of the developer's estimate. Often such selection leads to the rejection of several problems and debate over matters of judgment which force problem refinements.

Upon final problem selection ETS was to assume responsibility for scoring. Examiners familiar with written simulations would assign scores to alternative paths in order to compensate for option weights. This stage in development contrasts with final selection in that weights concern only the options available at a given decision point whereas scores refer to the paths or branches through the problem. Scores prevent an inefficient management strategy from building to a positive total which exceeds the score associated with a direct problem solution. For decision points about what action a physicians' assistant would pursue, such as orders for patient therapy, a score should follow from relative weights. Where the test taker must elect several options (e.g., in ordering laboratory studies), the proper score would be a proportion which reflects the choice of options judged to be mandatory as well as a penalty for the selection of superfluous options.

Recommendations

The two problems on respiratory disease and the two on gastrointestinal disease (appended to these notes) draw fairly upon material unique to the POMC as well as material common with regular training. However, four problems do not constitute an adequate pool for selection. The number of simulations submitted for review necessarily constrains our flexibility for selecting among potential simulations. Still, the scenarios depicted in these problems adhere to the basic requirements for patient management problems. The most pronounced need for further work lies in editorial corrections for consistency in wording, standard directions, and other stylistic matters as punctuation and jargon.

There is another general weakness in the complexity of the branching. The multiple paths permitted through a problem, which at times appear to fold back, make the task of assigning weights and scores both difficult and open to conflict. This is in part due to the repetition of certain subsections (e.g., problem I, sections E 10-13, F 12-15, G 1-3, I 9-11). Paths should be as simple as possible so as to avoid complications which later affect reliability and validity. Natural problem boundaries and the mechanics of latent image responses which immediately reveal prior choices represent common devices for achieving simple problem structure.

Three other suggestions might be constructive for further work on these problems. Often the opportunity to provide feedback for the test taker is not employed to its fullest advantage. At several points an option provides no feedback or insufficient information. For example, section C-4 in the third problem might give a further description of similar episodes. Feedback such as "patient refuses examination" portrays an unusual situation and provides no useful information in patient management. The consequences of decisions should enable a candidate for physicians' assistant to consider alternative management strategies and contribute to the process of making subsequent choices.

A somewhat related recommendation concerns opportunities to assign weights. Options with tentative weights of zero consume valuable time in testing without contributing to test score (e.g., problem II, section B-1, 2, 3, 4, 6). Such options should either be chosen as standard practice in physical examination, and therefore receive positive weight despite their irrelevance to a particular case, or represent inefficient, perhaps improper choices and carry a penalty in weight.

Finally, there is an infrequent but serious conflict in diagnosis depending on the actions taken by an examinee. The cecal carcinoma in problem II should be either operable or inoperable. An abdominal examination, problem III, might reveal "inspectobese" as in section N-6 or "inspect-negative" as in section F-6. Certainly the conflict in abdominal examination is less serious than that regarding the cecal carcinoma, but it perhaps signifies a difficulty in refining a simulation with unnecessarily complex paths. Attention to diagnostic as well as editorial details should eliminate such inconsistencies.

Prior to the actual administration of these problems, the stages of final selection and score assignment should be completed. This process would resolve points such as those mentioned in these recommendations and result in patient management problems appropriate for candidates in military physicians' assistant programs.

Drafts for Patient Management Problems

Problem I

Section A

A 34 year old white female Air Force nurse is seen in the dispensary because of dyspnea. At first glance she appears to be anxious, but she is comfortable at rest.

What should your INITIAL action be? (Choose only ONE)

(+4)	A-1	Obtain a history from the patient.	A-1	Go to Section D
(+1)	A-2	Review the patient's medical record	A-2	Go to Section B
(-2)	A-3	Examine the patient	A-3	Go to Section F
(-4)	A-4	Order diagnostic studies	A-4	Go to Section E

Problem I

Section B

Uncover the information immediately below and then proceed. (Latent image)

The medical record shows no hospital or clinic visits other than routine gynecologic examinations.

What should your next action be? (Choose only ONE of the following, and choose an action that you have NOT already taken.)

(+1)	B-1	Obtain a history from the patient.	B-1	Go to Section D
(+2)	B-2	Examine the patient	B-2	Go to Section F
(-1)	B-3	Order diagnostic studies	B-3	Go to Section E
(-2)	B-4	Develop a therapeutic plan	B-4	Go to Section C

Section C

The PRIMARY component of your therapy should be:

(Choose only ONE of the following)

(-2)	C-1	Have the patient rebreathe in a paper bag.	C-1	The patient seems stable and you send her home. Go to Section G.
(-4)	C-2	Reassure the patient and send her home with instructions to return in the morning if she is not improved.	C-2	Go to Section G.
(+3)	C-3	Admit the patient and call a physician to see her.	C-3	Go to Section K
(-2)	C-4	Prescribe bronchodilators for the patient and tell her to return in the morning for followup.	C-4	Go to Section G
(-2)	C-5	Have the patient rebreathe into a paper bag, and suggest that she seek psychiatric help to resolve her home problems.	C-5	The patient becomes indignant and leaves. Go to Section G.
(+7)	C-6	Admit the patient for observation and call a physician if no improvement is seen within 6 hours.	C-6	After 6 hours the patient's condition has not changed. A physician is consulted. Go to Section K.

Section D

The following areas may be probed. Choose the one(s) that you feel is (are) pertinent. (You may choose MORE than one.)

(+2)	D-1	What was the nature of the onset?	D-1	The onset of symptoms occurred when the patient got up after watching TV.
(+1)	D-2	How severe is the problem?	D-2	She is comfortable at rest, but she is dyspneic while walking.
(+2)	D-3	Were there prior similar problems?	D-3	No

Section D (Cont.)

(+2)	D-4	Is chest pain present?	D-4	No
(+1)	D-5	Is cough present?	D-5	No
(+1)	D-6	Has the patient traveled recently?	D-6	The patient went to Oklahoma City two months ago, but there has been no other recent travel.
(-2)	D-7	What is the family history?	D-7	The patient's father died of a heart attack at age 60. The patient's mother has diabetes mellitus but does not require insulin.
(+1)	D-8	Have there been any recent emotional problems?	D-8	She had a fight with her husband concerning her mother's "meddling" in their affairs.
(+2)	D-9	Are any medications being taken currently?	D-9	The patient takes only birth control pills which she has taken for the past 3 years.
(-2)	D-10	Is there any increased frequency of urination?	D-10	No
(-2)	D-11	What is the frequency of bowel movements?	D-11	The patient usually has a daily bowel movement. She has not had one today.
(-2)	D-12	Has the patient been married previously?	D-12	No
(-2)	D-13	Has there been any liver disease in the past?	D-13	The patient had infectious hepatitis 10 years ago with no apparent sequellae.
(-2)	D-14	Is there a history of childhood seizures?	D-14	No

What should your next action be? (Choose only ONE, and choose an action that you have NOT already taken.)

(+2)	D-15	Review the patient's medical record.	D-15	Go to Section B
(+2)	D-16	Examine the patient	D-16	Go to Section F
(-1)	D-17	Order diagnostic studies	D-17	Go to Section E
(-3)	D-18	Develop a therapeutic plan	D-18	Go to Section C

Section E

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MOTE than one, if you wish.)

(-1)	E-1	Complete blood count.	E-1	Hct 39, Hgb 13, WBC 8600
(-1)	E-2	Sputum smear and gram stain	E-2	Mixed flora seen
(-2)	E-3	SGOT and Bilirubin	E-3	SGOT 35 J.U Bilirubin 0.6 ng % (both normal)
(+2)	E-4	Arterial blood gases	E-4	Pa_{O_2} 75mmHg Pa_{CO_2} 30mmHg pH 7.46
(-2)	E-5	Spirometry	E-5	Spirometry normal
(+2)	E-6	PA and Lat chest x-ray	E-6	Negative
(+1)	E-7	EkG	E-7	Tachycardia (110), otherwise negative
(+1)	E-8	Lung scan	E-8	Perfusion filling defect in right upper lobe
(-1)	E-9	End-expiratory PA chest x-ray	E-9	Negative

What should your next action be? (Choose only ONE of the following, and choose an action that you have NOT already taken.)

(-2)	E-10	Obtain a history from the patient.	E-10	Go to Section D
(+1)	E-11	Review the patient's medical record.	E-11	Go to Section B
(-2)	E-12	Examine the patient.	E-12	Go to Section F
(+2)	E-13	Develop a therapeutic plan.	E-13	Go to Section C

Section F

From the following areas, choose the part(s) of the physical examination that you feel is (are) pertinent. (You may choose MORE than one if you wish.)

(+1)	F-1	General Appearance	F-1	She seems anxious, but is in no respiratory distress.
(+2)	F-2	Vital signs	F-2	Temp 99°F (37.2°C). Pulse 115 regular Respirations 26 regular BP 115/80
(-2)	F-3	Head and neck examination	F-3	Head, eyes, ears, nose, throat, and neck normal
(+2)	F-4	Chest examination	F-4	Inspect - no accessory muscles used. Movements are symmetrical Palpate - fremitus equal bilaterally Percuss - normal Auscultate - scattered wheezes right anterior superior chest
(+2)	F-5	Cardiac examination	F-5	Inspect - normal Palpate - normal Auscultate - normal
(-1)	F-6	Abdominal examination	F-6	Inspect - normal Auscultate - normal Percuss - no hepatic enlargement Palpate - no masses or tenderness
(+1)	F-7	Examination of the upper extremities	F-7	No cyanosis or clubbing. Pulses normal
(+1)	F-8	Examination of the lower extremities	F-8	Slight left ankle edema, tenderness in the left calf with Homan's sign positive. No cords felt in posterior calf.
(-2)	F-9	Gynecologic examination	F-9	Patient refuses examination
(-2)	F-10	Lymph node examination	F-10	Negative
(-2)	F-11	Neurological examination	F-11	Mental status - normal Cranial nerves - intact Sensory - intact Motor and cerebellar - normal Reflexes - intact

Section F (Cont.)

What should your next action be? (Choose only ONE action, and choose one that you have NOT already taken.)

(-2)	F-12	Obtain a history from the patient.	F-12	Go to Section D
(+2)	F-13	Review the patient's medical record.	F-13	Go to Section B
(+2)	F-14	Order diagnostic studies	F-14	Go to Section E
(-3)	F-15	Develop a therapeutic plan.	F-15	Go to Section C

Section G

Uncover the information immediately below and then proceed. (Latent image)

The patient returns to the dispensary the next morning. She is in moderate distress, breathing rapidly while she is sitting.

What should your next action be? (Choose only ONE of the following.)

(+2)	G-1	Obtain an interval history.	G-1	Go to Section J.
(+1)	G-2	Examine the patient.	G-2	Go to Section H
(-2)	G-3	Order diagnostic studies.	G-3	Go to Section I

Section H

From the following areas, choose the part(s) of the physical examination that you feel is (are) pertinent. (You may choose MORE than one if you wish.)

(0)	H-1	General appearance	H-1	Breathing rapidly while at rest. Grimace when taking a deep breath.
(0)	H-2	Vital signs	H-2	T 99^{8}°F (37.6°C) P 125 regular R 32 regular BP 110/80

Section H (Cont.)

(-2)	H-3	Head and neck examination	H-3	Head, eyes, ears, nose, throat, and neck normal. Mucous membranes pink.
(0)	H-4	Chest examination	H-4	Inspect - rapid shallow breathing Palpate - normal Auscultate - wheezes and crackling sounds heard over right superior anterior chest
(0)	H-5	Cardiac examination	H-5	Inspect - normal Palpate - normal Auscultate - pulmonic component of S_2 seems increased
(-2)	H-6	Abdominal examination	H-6	Inspect - normal Auscultate - normal Percuss - normal Palpation - normal
(0)	H-7	Examination of the upper extremities	H-7	No cyanosis or clubbing
(0)	H-8	Examination of the lower extremities	H-8	Increased edema of the left ankle. Tenderness is present in the left calf with Homan's sign positive. No cords are felt in the calf.
(-2)	H-9	Gynecologic examination	H-9	Patient refuses to be examined.
(-2)	H-10	Lymph node examination	H-10	Negative
(-2)	H-11	Neurologic examination	H-11	Mental status - normal Cranial nerves - normal Sensory - intact Motor and cerebellar - normal Reflexes - intact

What should your next course of action be? (Choose only ONE of the following and choose one you have already taken since the patient's return.)

(+1)	H-12	Obtain an interval history.	H-12	Go to Section J.
(+2)	H-13	Order diagnostic studies	H-13	Go to Section I
(-2)	H-14	Develop a therapeutic plan	H-14	Go to Section K

Section I

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(-1)	I-1	Complete blood count.	I-1	Hct 38 Hbg .3 WBC 10,500
(-1)	I-2	Sputum smear and gram stain	I-2	Unable to produce sputum
(0)	I-3	Arterial blood gases	I-3	Pa_{O_2} 70mmHg Pa_{CO_2} 25mmHg PH 7.47
(-1)	I-4	Spirometry	I-4	Spirometry negative
(0)	I-5	PA and Lateral Chest X-rays	I-5	Negative
(-1)	I-6	EkG	I-6	Sinus tachycardia Signs of right ventricular strain
(0)	I-7	Lung scan	I-7	Perfusion defects in right upper lobe and in left lower lobe
(-1)	I-8	End-expiratory PA chest film	I-8	Negative

What should your next action be? (Choose only ONE and choose one that you have NOT already taken.

(-2)	I-9	Obtain an interval history	I-9	Go to Section J
(-2)	I-10	Examine the patient	I-10	Go to Section H
(+2)	I-11	Develop a therapeutic plan	I-11	Go to Section K

Section J

The following question(s) may be asked. Choose the one(s) that you feel is (are) most important. (You may select MORE than one.)

(0)	J-1	Is dyspnea present?	J-1	She is moderately dyspneic at rest.
(0)	J-2	Is there chest pain?	J-2	On deep inspiration there is pain in the right anterior superior chest.

Section J (Cont.)

(0)	J-3	Is cough or hemoptysis present?	J-3	No
(0)	J-4	Are any medications being taken?	J-4	None, except virth control pills
(0)	J-5	Is there any wheezing noted by the patient?	J-5	No
(0)	J-6	How severe are the symptoms?	J-6	Her sumptoms are worse than they were yesterday
(0)	J-7	Are there any ameliorating factors?	J-7	Sitting quietly minimizes the symptoms
(-2)	J-8	Has the patient had any frequency of urination?	J-8	No
(-2)	J-9	Is there a history of diabetes in the family?	J-9	The patient's mother has diabetes for which no insulin is needed
(-2)	J-10	Is there a history of seizures as an adult?	J-10	No
(-2)	J-11	Is there a history of diarrhea or vomiting?	J-11	No
(0)	J-12	Are there any exacerbating	J-12	Activity or taking a deep breath worsens the chest pain.
(0)	J-13	What is the nature of the symptoms?	J-13	The chest pain is sharp and doesn't radiate.

What should your next action be? (Choose only ONE action and select one that you have not already taken since the patient's return.)

(+2)	J-14	Examine the patient for interval changes	J-14	Gc to Section H.
(-1)	J-15	Obtain diagnostic studies	J-15	Go to Section I.
(-3)	J-16	Develop a therapeutic plan	J-16	Go to Section K.

Section K

Uncover the information immediately below, and then proceed. (Latent image)

The patient has been admitted to the hospital and is less anxious than she was before.

Section K (Cont.)

What should be the PRIMARY component of your therapy? (Choose only ONE of the following.)

(-2)	K-1	Order a chest tube set for the physician to insert at the bedside.	K-1	After reviewing the case with the attending physician, and ordering other pertinent studies, heparin therapy is initated. Go on to next problem.
(-1)	K-2	Initiate inrravenous bronchodilator therapy with aminophylline	K-2	After reviewing the case with the attending physician, and ordering other pertinent studies, heparin therapy is initiated. Go on to next problem.
(-1)	K-3	Observe the patient for progression of her symptoms	K-3	After reviewing the case with the attending physician, and ordering other pertinent studies, heparin therapy is initiated. Go on to next problem.
(+2)	K-4	Start on IV so that heparin therapy can be initiated.	K-4	After one day of therapy, the patient seems much more comfortable. Go on to next problem.

Problem II

Section A

A 62 year old retired TSgt presents because of decreased stamina. Since retirement he has been a letter carrier, and lately he has been unable to complete his appointed rounds, despite fair weather.

What should your INITIAL action be? (Choose only ONE of the following.)

(+2)	A-1	Obtain a history from the patient.	A-1	Go to Section H
(+1)	A-2	Review the patient's medical record	A-2	Go to Section C
(-2)	A-3	Examine the patient	A-3	Go to Section D
(-4)	A-4	Order diagnostic studies	A-4	Go to Section E

Section B

Choose the area(s) of the physical exam that are pertinent. (You may choose MORE than one if you wish.)

(0)	B-1	General appearance	B-1	Moderately obese. Appears comfortable at rest.
(0)	B-2	Vital signs	B-2	T 98^{0}F (37^{0}C). P 110 reg. R 16 reg; BP 120/80 (No orthostatic change) Ht 5'9 Wt 185 lbs.
(0)	B-3	Head and neck exam	B-3	Paleness of palpebral conjunctiva and oral mucous membranes. Otherwise negative.
(0)	B-4	Chest exam	B-4	Inspect - normal Palpate - negative Percuss - normal Auscultate - normal systolic ejection murmur heard at left sternal border.
(-1)	B-5	Cardiac exam	B-5	Inspect - normal Palpate - normal Auscultate - Grade II/VI systolic ejection murmur heard at left sternal border
(0)	B-6	Abdominal exam	B-6	Inspect - normal Auscultate - normal Percuss - liverheight 9cm at mid-clavicular line Palpate - apparent stool-filled bowel in right lower quadrant

Section B (Cont.)

(-1)	B-7	Upper extremities	B-7	Pulses normal. No clubbing or cyanosis. Nail beds pale.
(-1)	B-8	Lower extremities	B-8	No edema. Pulses full
(0)	B-9	Genital and rectal exam	B-9	Genitalia normal. No hernias. Hard stool in rectum, but no masses.
(0)	B-10	Lymph node exam	B-10	Normal
(-1)	B-11	Neurologic exam	B-11	Mental status - normal Cranial nerves - intact Sensory exam - intact Strength and coordination - intact Reflexes - intact

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since the patient's return.)

(-1)	B-12	Obtain a history from the patient	B-12	Go to Section J
(+1)	B-13	Obtain diagnostic studies	B-13	Go to Section L
(-2)	B-14	Develop a plan to manage the patient's problem	B-14	Go to Section K

Section C

Uncover the information immediately below, and then proceed. (Latent image)

Review of the medical record shows that the patient was treated for epistaxis 1 1/2 years ago. At that time, his Hct was 43, Hgb 14.2, WBC 8600.

What should your next action be? (Choose only ONE of the following and choose an action you have NOT already taken.)

(+1)	C-1	Obtain a history from the patient.	C-1	Go to Section H
(+2)	C-2	Examine the patient	C-2	Go to Section D
(-1)	C-3	Order diagnostic studies	C-3	Go to Section E
(-2)	C-4	Determine a plan for managing the patient's problem.	C-4	Go to Section G

Section D

From the following components of the physical examination, choose the one(s) that is (are) pertinent. (You may choose MORE than one if you wish.)

(+1)	D-1	General appearance	D-1	Moderately obese. Comfortable at rest. Appears well tanned (it is summer).
(+1)	D-2	Vital signs	D-2	Temp 98^{6}F (37°C) P 100 reg (No orthostatic change) R 18 reg BP 130/70 (No orthostatic change) Ht 5'9" Wt 190 lbs
(+1)	D-3	Head and neck exam	D-3	Head, eyes, ears, throat, neck normal except for paleness of palpebral conjunctiva and oral mucous membranes.
(+1)	D-4	Chest examination	D-4	Inspection - normal Palpate - negative Percuss - normal Auscultate - normal
(+1)	D-5	Cardiac examination	D-5	Inspect - normal Palpate - normal Auscultate - Grade II/VI systolic ejection murmur heard at left sternal border.
(+1)	D-6	Abdominal examination	D-6	Inspect - normal Auscultate - normal Percuss - liver height 9cm Palpate - negative - no masses felt
(+1)	D-7	Examination of upper extremities	D-7	Nail beds pale. Pulses full and equal. No clubbing or cyanosis.
(-1)	D-8	Examination of lower extremities	D-8	No edema. Pulses full and equal.

Section D (Cont.)

(+1)	D-9	Genitalia and rectal examination	D-9	External genitalia normal. No inguinal hernia present. Rectal negative with small amount of brown stool
(+1)	D-10	Lymph node examination	D-10	Negative
(-2)	D-11	Neurologic examination	D-11	Mental status - normal Cranial Nerves - intact Sensory - normal Motor and cerebellar - normal Reflexes - intact

What should your next action be? (Choose only ONE and select an action that you have NOT already taken.)

(-2)	D-12	Obtain a history from the patient	D-12	Go to Section H
(+1)	D-13	Review the patient's medical record	D-13	Go to Section C
(+2)	D-14	Order diagnostic studies	D-14	Go to Section E
(-3)	D-15	Develop a plan for managing the patient's problem	D-15	Go to Section G

Section E

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(+2)	E-1	Complete blood count	E-1	Hct 32 Vol % Hgb 9.3 gm % RBC 4,000,000/mm^3 MCHC 28 MCV 80
(-1)	E-2	Urinalysis	E-2	Specific gravity 1.018 Sugar - negative Protein - negative Microscopic - negative

Section E (Cont.)

(-2)	E-3	Arterial blood gases	E-3	Pa_{O_2} 95mmHg Pa_{CO_2} 40mmHg pH 7.38
(+1)	E-4	PA and Lateral chest x-rays	E-4	Negative
(-1)	E-5	Platelet count	E-5	275,000/mm^3
(+1)	E-6	Stool for ova and parasites	E-6	Negative
(+2)	E-7	Stool guaiac	E-7	3+(positive)

Your next course of action should be: (Choose only ONE of the following, and choose an action that you have NOT already taken.)

(-2)	E-8	Obtain a history from the patient	E-8	Go to Section H
(-1)	E-9	Review the patient's medical record	E-9	Go to Section C
(-1)	E-10	Examine the patient	E-10	Go to Section D
(+2)	E-11	Develop a plan for managing the patient's problem.	E-11	Go to Section G

Section F

Uncover the information below and then proceed (Latent image)

The patient returns in one month as directed. His problem has not resolved.

What should your next action be? (Choose only ONE from the list below.)

(+2)	F-1	Obtain a history from the patient	F-1	Go to Section J
(-1)	F-2	Examine the patient	F-2	Go to Section B
(-2)	F-3	Obtain diagnostic studies	F-3	Go to Section L
(-3)	F-4	Develop a plan for managing the patient's problem.	F-4	Go to Section K

Section G

The PRIMARY component of your plan should be: (Choose only ONE of the following.)

(-2)	G-1	Start the patient on iron therapy and instruct him to return in one month for followup evaluation.	G-1	Go to Section F
(-2)	G-2	Advise the patient to stop smoking, lose weight, and begin an exercise program. Return in one month for followup evaluation.	G-2	Go to Section F
(+2)	G-3	Obtain further diagnostic studies.	G-3	Go to Section I
(-4)	G-4	Advise the patient to consider retirement due to the degree of exercise required by his job. Return in one month for further evaluation.	G-4	Go to Section F

Section H

The following areas may be probed. Ask the question (s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(+2)	H-1	What is the duration of the problem?	H-1	Symptoms have been present for about 2 months, and it seems to be getting worse.
(-1)	H-2	Is there any chest pain?	H-2	No
(-2)	H-3	Is there a history of seizures	H-3	No
(+1)	H-4	Is there any change in weight.	H-4	No
(-1)	H-5	Have there been recent emotional problems?	H-5	No
(+1)	H-6	Are there any bleeding tendencies?	H-6	No
(+1)	H-7	Is cough present?	H-7	No

(+1)	H-8	Is there frequency of urination?	H-8	No
(+1)	H-9	What is the frequency of bowel movements?	H-9	The patient used to have daily bowel movements, but recently he has been having them every other day. No change in the shape of the stool.
(-2)	H-10	Is there a history of joint problems such as arthritis?	H-10	No
(-2)	H-11	Is there a history of allergies?	H-11	No
(+1)	H-12	What is the nature of the symptoms?	H-12	The patient simply complains of decreased stamina with easy fatigue on exercise.
(+1)	H-13	Does the patient smoke?	H-13	He smokes 1 1/2 packs per day.

What should your next action be? (Choose only ONE and select an action that you have NOT already taken.)

(+2)	H-14	Review the patient's medical record.	H-14	Go to Section C
(+1)	H-15	Examine the patient	H-15	Go to Section D
(-1)	H-16	Order diagnostic studies	H-16	Go to Section E
(-3)	H-17	Develop a plan for managing the patient's problem.	H-17	Go to Section G

Section I

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(+1)	I-1	Hemoglobin electrophoresis	I-1	Normal
(-2)	I-2	Lung scan	I-2	Normal
(+2)	I-3	Serum iron and total iron binding capacity	I-3	Se Fe 25 vg% (normal 70-180) TIBC 400 vg% (normal 300-360)
(-2)	I-4	Thyroid scan	I-4	Normal
(+2)	I-5	Barium enema	I-5	Filling defect in the cecal area, otherwise normal.
(+2)	I-6	Upper GI study	I-6	Normal

Section I (Cont.)

(-2)	I-7	IVP	I-7	Negative
(-2)	I-8	Spirometry	I-8	Normal

After you have selected the tests that you wish to order, uncover the response immediately below.

(Latent image) Go to Section K

Section J

The following areas may be probed. Ask any question(s) that you feel is (are) important. (You may ask MORE than one if you wish.)

(-1)	J-1	Has there been any chest pain?	J-1	No
(0)	J-2	What causes the problem?	J-2	Simple exertion (for example, climbing stairs or mowing the lawn) causes tiredness.
(-2)	J-3	Have there been any headaches?	J-3	No
(0)	J-4	Has there been any change in weight?	J-4	The patient has lost 5 lbs over the last month.
(0)	J-5	Is cough present?	J-5	No
(0)	J-6	Has there been any joint problem such as arthritis?	J-6	No
(0)	J-7	What relieves the problem?	J-7	The patient feels better after resting for 1/2 hour.
(-2)	J-8	Has there been any dysuria?	J-8	No

What should your next action be? (Choose only ONE and select an action that you have not taken since the patient's return.)

(+2)	J-9	Examine the patient	J-9	Go to Section B
(-1)	J-10	Order diagnostic studies	J-10	Go to Section L
(-3)	J-11	Develop a plan for managing the patient's problem.	J-11	Go to Section K

Section K

The PRIMARY component of your plan should be: (Choose only ONE of the following.)

(-5)	K-1	Prescribe iron tablests and vitamin B_6 (pyridoxine)	K-1	The patient returns, having lost more weight. Exam reveals an abdominal mass which turns out to be an inoperable cecal carcinoma. Go on to the next problem.
(+5)	K-2	Request a consultation to General Surgery, asking their opinion.	K-2	Based on the barium enema, the general surgeon agrees that the patient probably has a localized cecal carcinoma. This is confirmed on laparotomy, and the tumor is removed. The patient is doing well post-operatively. Go on to the next problem.
(+1)	K-3	Admit the patient for blood transfusions to further define the etiology of the problem.	K-3	The attending physician reviews the barium enema and requests a General Surgery consult. The patient is doing well after a localized cecal carcinoma is removed. Go on to the next problem.
(+3)	K-4	Request a consultation from Internal Medicine (Hematology) to further evaluate the problem.	K-4	After reviewing the data, the internist requests a General Surgery consultation. The surgeon agrees that the patient probably has a cecal carcinoma, (based on the barium enema). the patient is doing well after removal of a localized cecal carcinoma. Gon on to next problem.

Section L

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may select MORE than one if you wish.

(-1)	L-1	Urinalysis	L-1	Specific gravity 1.020 Sugar, protein - negative Microscopic - negative
(0)	L-2	CBC	L-2	Hct 28 vol% RBC 3,540,000/mm^3 MCHC 27.1 MCV 79
(-2)	L-3	Arterial blood gases	L-3	Pa_{O_2} 92mmHg Pa_{CO_2} 38mmHg pH 7.40
(0)	L-4	Platelet count	L-4	275,000/mm^3
(0)	L-5	Stool for ova and parasites	L-5	Negative
(0)	L-6	Stool for guaiac	L-6	3+ positive
(0)	L-7	Hemoglobin electrophoresis	L-7	Normal
(0)	L-8	Serum iron and total iron binding capacity	L-8	SeFe 20 vg% (70-180 normal) TIBC 430 vg% (300-360 normal)
(-2)	L-9	Lung scan	L-9	Normal
(0)	L-10	Barium enema	L-10	Filling defect in cecal area
(-2)	L-11	Gall Bladder series	L-11	Normal

What should your next action be? (Choose only ONE of the following actions, and select an action that you have not already taken since the patient's return.)

(-2)	L-12	Obtain a history from the patient	L-12	Go to Section J
(-1)	L-13	Examine the patient	L-13	Go to Section B
(+2)	L-14	Develop a plan to manage the patient's problem.	L-14	Go to Section K

Problem III

Section A

A 58 year old retired Air Force navigator presents to the emergency room because of shortness of breath. Upon first glance, he appears to be moderately dyspneic at rest.

What should your INITIAL action be? (Choose only ONE)

(+2)	A-1	Obtain a history from the patient.	A-1	Go to Section C
(+1)	A-2	Review the patient's medical record	A-2	Go to Section I
(-2)	A-3	Examine the patient.	A-3	Go to Section F
(-4)	A-4	Order diagnostic studies.	A-4	Go to Section D

Section B

The following tests are available. Order the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(-1)	B-1	CBC (complete blood count)	B-1	Hct 54; Hgb 18; WBC 10,000
(-1)	B-2	Spirometry	B-2	FVC 3.0 liters (4.5 liters expected) FEV 1.5 liters (3.8 liters expected) Patient unable to produce full effort.
(0)	B-3	EkG	B-3	Sinus tachycardia; otherwise unremarkable
(-2)	B-4	SGOT	B-4	SGOT 22 J.U. (3-26 normal)
(0)	B-5	Arterial blood gases	B-5	Pa_{O_2} 40mmHg Pa_{CO_2} 62mmHg pH 7.28
(0)	B-6	Chest x-ray (PA and lateral)	B-6	Flattening of diaphragms and diffuse increase in bronchial markings. Otherwise negative.

Section B (Cont.)

(-2)	B-7	Urinalysis	B-7	Specific Grav. 1.024 Glucose, protein-negative Micro - negative
(-2)	B-8	Blood sugar	B-8	102 mg%
(-2)	B-9	Protein electrophoresis	B-9	Normal
(0)	B-10	Sputum smear for gram stain	B-10	Mixed flora

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since seeing the patient again.

(-2)	B-11	Obtain a history from the patient	B-11	Go to Section M
(-1)	B-12	Examine the patient	B-12	Go to Section K
(+2)	B-13	Develop a plan to manage the patient's problem.	B-13	Go to Section L

Section C

The following questions may be asked. Choose the one(s) that you feel is (are) pertinent. (You may choose MORE than one.)

(+2)	C-1	Describe the symptoms	C-1	"I just can't get my breath and my chest feels tight."
(+2)	C-2	What is the duration of the symptoms?	C-2	One day.
(+1)	C-3	Have there been any palpitations (irregular heartbeat)?	C-3	No
(+1)	C-4	Have there been similar problems in the past?	C-4	The patient has had several similar episodes; that last one 3 months ago.
(+1)	C-5	Is the patient taking any medications?	C-5	The patient uses an isoprotevenol nebulizer as needed, and currently is taking oral aminophylline on a regular basis.
(-2)	C-6	Is there a history of dysuria?	C-6	The patient had a urinary tract infection 8 months ago.

Section C (Cont.)

(-2)	C-7	Is there a history of headaches?	C-7	The patient has a lifelong history of migraine headaches; the last one occurring 1 month ago. There is no headache now.
(-2)	C-8	Is there any difficulty swallowing?	C-8	No
(+1)	C-9	Is there a history of cough?	C-9	The patient reports productive morning cough for at least 5 years. The sputum is yellow.
(+1)	C-10	Has the patient felt feverish?	C-10	After coughing spasms, the patient is sweaty.
(+2)	C-11	Does the patient smoke?	C-11	Two packs per day.
(-2)	C-12	Has there been any abdominal pain?	C-12	No

What should your next action be? (Choose only ONE, and choose an action that you have not already taken.)

(+2)	C-13	Review the patient's medical record.	C-13	Go to Section I
(+1)	C-14	Examine the patient.	C-14	Go to Section F
(-1)	C-15	Order diagnostic studies	C-15	Go to Section D
(-2)	C-16	Develop a plan to manage the patient's problem.	C-16	Go to Section E

Section D

The following studies may be obtained. Select the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(+1)	D-1	CBC (Complete blood count)	D-1	Hct 54; Hgb 18; WBC 9800
(-1)	D-2	Spirometry	D-2	FVC 4.4 liters (4.5 liters expected) FEV 2.2 liters (3.8 liters expected)
(+1)	D-3	EkG	D-3	Sinus tachycardia, otherwise unremarkable
(-2)	D-4	SGOT	D-4	20 I.U. (3-26 normal)

Section D (Cont.)

(+2)	D-6	Chest x-ray (PA and	D-6	Flattening of diaphragm and diffuse increase in bronchial markings. Otherwise negative.
(-2)	D-7	Urinalysis	D-7	Spec. Grav. 1.020 Glucose, protein - neg. Micro - neg.
(-2)	D-8	Blood sugar	D-8	92mg%
(-2)	D-9	Protein electrophoresis	D-9	Normal
(+2)	D-10	Sputum smear for gram stain	D-10	Mixed flora

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken.)

(-2)	D-11	Obtain a history from the patient.	D-11	Go to Section C
(-1)	D-12	Review the patient's medical record.	D-12	Go to Section I
(-2)	D-13	Examine the patient	D-13	Go to Section F
(+2)	D-14	Develop a plan to manage the patient's problem.	D-14	Go to Section E

Section E

The PRIMARY component of your plan should be: (Choose only ONE of the following.)

(-5)	E-1	Epinephrine 3cc Sq then home on: tedral tetracycline fluids Return if no improvement	E-1	Go to Section G
(-2)	E-2	Aminophylline IV Oral fluids oxygen via nasal canula Recheck in 1/2 hour or sooner	E-2	Go to Section J and uncover response J-1

Section E (Cont.)

(-1)	E-3	Aminophylline IV oral fluids Oxygen by 35% ventimask. Recheck in 1/2 hour or sooner	E-3	Go to Section J and uncover response J-1
(+4)	E-4	Aminophylline IV Oral fluids Oxygen by 24% ventimask; Recheck in 1/2 hour or sooner	E-4	Go to Section H
(-3)	E-5	Oxygen by nasal canula and admit the patient.	E-5	Go to Section J and uncover response J-2

Section F

Choose the area(s) of the physical examination that are most pertinent. You may choose MORE than one if you wish.

(+1)	F-1	General appearance	F-1	Plethoric appearing white male with moderately labored breathing while sitting.
(+2)	F-2	Vital signs	F-2	T $98^{6^{o}}$F (37^{o}C); P 110 reg R-26 reg; BP 145/90; Ht 5'9"; Wt 185 lbs.
(-1)	F-3	Head and neck examination	F-3	Normal except for distended neck veins during expiration; Mucous membrane pink.
(+2)	F-4	Chest examination	F-4	Inspect. Increased antero-posterior diameter Palpate - decreased fremitus throughout. Percuss - Normal Auscultate - Scattered wheezes that changed but did not clear after cough.
(+1)	F-5	Cardiac examination	F-5	Inspect - no pulsations seen. Palpate - PMI not felt Auscultate - Heart sounds are distant, but are apparently normal.

Section F (Cont.)

(-2)	F-6	Abdominal examination	F-6	Inspect - Obese Auscultate - negative Palpate - Inferior liver edge felt, and liver height was 10 cm in midclaviculare line.
(+1)	F-7	Upper extremities	F-7	No clubbing. Nail beds dusky.
(+1)	F-8	Lower extremities	F-8	Trace pedal edema bilaterally Toes dusky
(-2)	F-9	Genitalia and rectal examination	F-9	Normal except for moderately enlarged prostrate
(-2)	F-10	Lymph node examination	F-10	Negative
(-2)	F-11	Neurologic examination	F-11	Mental status - intact Cranial nerves - intact Sensory - intact Motor and cerebellar - normal Reflexes - intact

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken.)

(-1)	F-12	Review the patient's medial record.	F-12	Go to Section I
(-2)	F-13	Obtain a history	F-13	Go to Section C
(+2)	F-14	Order diagnostic studies	F-14	Go to Section D
(-2)	F-15	Develop a plan to manage the patient's problem.	F-15	Go to Section E

Section G

Uncover the information below and then proceed. (Latent image)

The patient is returned by ambulance later that evening. The ambulance driver says that the patient was found by his wife to be lethargic and incoherent. She did not accompany the patient.

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since seeing the patient again.)

Section G (Cont.)

(-1)	G-1	Obtain a history from the patient.	G-1	Go to Section M
(+2)	G-2	Examine the patient	G-2	Go to Section K
(-1)	G-3	Order diagnostic studies	G-3	Go to Section B
(-4)	G-4	Develop a plan to manage the patient's problem.	G-4	Go to Section L

Section H

Uncover the information immediately below, and then proceed. (Latent image)

You return to check the patient after 20 minutes of therapy. On first glance, the patient appears about the same as when he first arrived.

What should your next action be?

(+2)	H-1	Obtain an interval history from the patient.	H-1	Go to Section O
(+1)	H-2	Examine the patient.	H-2	Go to Section N
(-1)	H-3	Order diagnostic studies	H-3	Go to Section P
(-3)	H-4	Develop a plan to manage the patient's problem.	H-4	Go to Section Q

Section I

Uncover the information immediately below and then proceed. (Latent image)

Review of the medical record reveals several prior admissions for respiratory distress. At the time of the last admission Pa_{O_2} was 48mmHg and Pa_{CO_2} was 55mmHg. pH was 7.32 α_1 antitrypson assay was normal.

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken.)

(+1)	I-1	Obtain a history from the patient.	I-1	Go to Section C
(+2)	I-2	Examine the patient.	I-2	Go to Section F

Section I (Cont.)

(-1)	I-3	Order diagnostic studies	I-3	Go to Section D
(-2)	I-4	Develop a plan to manage the patient's problem.	I-4	Go to Section E

Section J

J-1 (Latent image) After 20 minutes, you check on the patient and note that he is in the room with his eyes closed.

J-2 (Latent image) The patient is put in the wheelchair with a nasal canula and a portable O_2 tank. Twenty minutes later, you stop by the admissions office and notice the patient in the chair with his eyes closed.

What should your next action be?

(-5)	J-3	Leave the room so that the patient can rest.	J-3	Ten minutes later a tech tells you that the patient is barely arousable. Make another selection.
(+1)	J-4	Obtain a history from the patient.	J-4	Go to Section M
(+2)	J-5	Examine the patient	J-5	Go to Section K
(-1)	J-6	Order diagnostic studies	J-6	Go to Section B
(-2)	J-7	Develop a plan to manage the patient's problem.	J-7	Go to Section L

Section K

Choose the area(s) of the physical examination that is (are) most pertinent. You may choose MORE than one if you wish.

(0)	K-1	General appearance	K-1	Extremely lethargic, appears ashen (gray)
(0)	K-2	Vital signs	K-2	$T98^{6o}$ ($37^{o}C$); P 130 reg; R 36 reg and shallow; BP 140/90
(-2)	K-3	Head and neck examination	K-3	Negative except mucous membranes are gray

Section K (Cont.)

(0)	K-4	Chest examination	K-4	Inspect - accessory muscle use decreased. Palpate - decreased fremitus throughout Percuss - negative Auscultate - generally decreased breath sounds. Decreased wheezes.
(0)	K-5	Cardiac examination	K-5	Inspect - negative Palpate - PMI not felt Auscultate - Heart sounds are distant, but apparently normal
(-2)	K-6	Abdominal examination	K-6	Inspect - negative Auscultate - negative Percuss - liver height 10 cm at midclavicular line Palpate - liver edge felt
(0)	K-7	Upper extremities examination	K-7	Pulses equal bilaterally. No clubbing. Nail beds gray.
(-1)	K-8	Lower extremities examination	K-8	Trace edema, feet gray.
(-2)	K-9	Genitalia and rectal examination	K-9	No hernias; rectal negative.
(0)	K-10	Neurologic examination	K-11	Mental status - disoriented to time and place. Stuperous. Cranial nerves - intact Sensory - intact Motor and cerebellar - Unable to arise from chair. Otherwise negative. Reflexes - intact

What should your nex action be? (Choose only ONE of the following actions, and select one that you have NOT already taken since seeing the patient again.

Section K (Cont.)

(-2)	K-12	Obtain a history from the patient.	K-12	Go to Section M
(+2)	K-13	Order diagnostic studies	K-13	Go to Section B
(-2)	K-14	Develop a plan to manage the patient's problem.	K-14	Go to Section L

Section L

What should be the PRIMARY component of your plan? (Choose only ONE of the following.)

(+2)	L-1	Administer oxygen with 24% venti-mask, call a physician, and admit the patient.	L-1	The patient is admitted and requires mechanically assisted ventilation for only one day. Go on to next problem.
(-3)	L-2	Give 40% oxygen, call a physician, and admit the patient.	L-2	The patient is admitted and rapidly goes downhill until receiving mechanically assisted ventilation, which was required for 3 days. Go on to next problem.
(-2)	L-3	Give 40% oxygen, add I.V. antibiotics, call a physician, and admit the patient.	L-3	The patient is admitted and rapidly goes downhill until receiving mechanically assisted ventiliation, which was required for 3 days. Go on to next problem.

Section M

(Latent image) The patient is lethargic and is unable to give a coherent account of what happend.

What should your next action be? (Choose only ONE of the following actions, and select one that you have NOT already taken since seeing the patient again.

(1)	M-1	Examine the patient.	M-1	Go to Section K
(-1)	M-2	Morder diagnostic studies	M-2	Go to Section B
(-3)	M-3	Develop a plan to manage the patient's problem.	M-3	Go to Section L

Section N

Choose the area(s) of the physician examination that is (are) most pertinent. (You may choose MORE than one if you wish.)

(+2)	N-1	General appearance.	N-1	Plethoric appearing white male with moderately labored breathing while sitting.
(+2)	N-2	Vital signs	N-2	T 98^{6o}F (37^{o}C); P 115 reg; R 24 reg; BP 140/90
(-2)	N-3	Head and neck examination	N-3	Mucous membranes pink-gray; other wise negative.
(+2)	N-4	Chest examination	N-4	Inspect - Increased anterior-posterior diameter Palpate - generally decreased fremitus Percuss - negative Auscultate - scattered wheezes and crackles not entirely clearing with cough.
(+1)	N-5	Cardiac examination	N-5	Inspect - no impulses seen Palpate - PMI not felt Auscultate - heart sounds are distant but apparently normal
(-2)	N-6	Abdominal examination	N-6	Inspect - negative Auscultate - normal Percuss - liver height 10cm at mid-clavicular line Palpate - liver edge felt on inspiration
(-2)	N-7	Upper extremities examination	N-7	No clubbing or obvious cyanosis.
(-2)	N-8	Lower extremities examination	N-8	Trace edema at ankles
(-2)	N-9	Genitalia and rectal examination	N-9	Genitalia negative. Prostate moderately enlarged.
(-2)	N-10	Lymph node examination	N-10	Negative
(-2)	N-11	Neurologic examination	N-11	Mental status - oriented to time, person, place. Cranial nerves - intact Sensory - intact Motor and cerebellar - intact Reflexes - intact

Section N (Cont.)

What should your next action be? (Choose only ONE of the following actions, and select one that you have NOT already taken since seeing the patient again.)

(-1)	N-12	Obtain a history from the patient.	N-12	Go to Section O
(-2)	N-13	Order diagnostic studies	N-13	Go to Section P
(-2)	N-14	Develop a plan to manage the patient's problem.	N-14	Go to Section Q

Section O

Uncover the information below and then proceed. (Latent image)

The patient states that te feels only a little bit better compared to when he first arrived. He still feels tight and dyspneic.

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since seeing the patient again.)

(+2)	O-1	Examine the patient.	O-1	Go to Section N
(-1)	O-2	Order diagnostic studies	O-2	Go to Section P
(-3)	O-3	Develop a plan to manage the patient's problem.	O-3	Go to Section Q

Section P

The following studies may be ordered. Select the one(s) that you feel is (are) important. (You may select MORE than one if you wish.)

(-1)	P-1	CBC (complete blood count)	P-1	Hct 54.8: Hgb 18.2; WBC 9600
(-1)	P-2	Spirometry	P-2	FVC 4.2 liters (4.5 liters expected) FEV, 2.1 liters (3.8 liters expected)
(-1)	P-3	EkG	P-3	Negative except for sinus tachycardia

Section P (Cont.)

(-2)	P-4	SGOT	P-4	18 I.U. (normal 3-26)
(+2)	P-5	Arterial blood gases	P-5	Pa_{O_2} 68mmHg Pa_{CO_2} 48mmHg pH 7.37
(-1)	P-6	Chest x-ray (PA and Lateral)	P-6	Flattening of the diaphragms and increased bronchial markings. Otherwise negative (No interval change)
(-2)	P-7	Urinalysis	P-7	Spec Grav. 1.021 Glusose, protein - negative Micro - negative
(-2)	P-8	Blood sugar	P-8	104 mg%
(-2)	P-9	Protein electrophoresis	P-9	Normal
(-2)	P-10	Sputum smear for gram stain.	P-10	Mixed flora

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since seeing the patient again.)

(-2)	P-11	Obtain a history from the patient.	P-11	Go to Section O
(-2)	P-12	Examine the patient.	P-12	Go to Section N
(+2)	P-13	Develop a plan for managing the patient's problem.	P-13	Go to Section Q

Section Q

What should be the PRIMARY component of your plan? (Choose only ONE of the following.)

(-4)	Q-1	Epinephrine 0.3cc sq then home on: tedral tetracycline fluids Tell the patient to return if there is no improvements.	Q-1	Go to Section G

Section Q (Cont.)

(+1)	Q-2	Continue present therapy; Recheck within 1/2 hour to decide on a further plan.	Q-2	The patient does not improve and is admitted. Mechanically assisted ventiliation was not required. Go on to next problem.
(+4)	Q-3	Continue present therapy. Call a physician and admit the patient.	Q-3	The patient is admitted and does well. He is discharged after 5 days. Go on to next problem.
(+2)	Q-4	Continue present therapy; and add intravenous antibiotics. Recheck within 1/2 hour to decide on a further plan.	Q-4	The patient does not improve and is admitted. Mechanically assisted ventilation was not required. Go on to next problem.

Problem IV

Section A

A 22 year old white female dependent presents to the general therapy clinic complaining of nausea. She appears to be moderately uncomfortable but she is not in acute distress.

(+2)	A-1	Obtain a history from the patient.	A-1	Go to Section H
(+1)	A-2	Review the patient's medical record.	A-2	Go to Section D
(-2)	A-3	Examine the patient	A-3	Go to Section E
(-4)	A-4	Order diagnostic studies	A-4	Go to Section B

Section B

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(+1)	B-1	Complete blood count	B-1	Hct 38; Hgb 13; WBC 8600
(-2)	B-2	PA and Lateral chest x-ray	B-2	Negative
(-1)	B-3	Upper GI series (barium swallow)	B-3	No abnormalities seen
(-1)	B-4	EkG	B-4	Normal sinus rhythm
(-2)	B-5	Barium enema	B-5	Isolated colonic diverticulum noted.
(+2)	B-6	Transaminase (SGOT)	B-6	220 units (normal 6-20)
(-2)	B-7	Arterial blood gases	B-7	Pa_{O_2} 95mmHg Pa_{CO_2} 38mmHg pH 7.40
(+2)	B-8	Alkaline phosphatase	B-8	200 units (normal 55-239
(+1)	B-9	Urinalysis	B-9	Brown and clear Spec Grav. 1.018 Protein, sugar, microscopic - negative
(+2)	B-10	Serum Bilirubin	B-10	2.3 mg% (normal 1.5 mg%)

Section B (Cont.)

(+2)	B-10	Serum Bilirubin	B-10	2.3 mg% (normal 1.5 mg%)
(+1)	B-11	Serum amylase	B-11	62 units (normal 30-180
(-2)	B-12	Creatine phosphokinase (Cpk)	B-12	16 units (normal 0-65)

What should your next action be? (Choose only ONE and select an action that you have NOT already taken.)

(-2)	B-13	Obtain a history from the patient.	B-13	Go to Section H
(-2)	B-14	Review the patient's medical record	B-14	Go to Section D
(-2)	B-15	Examine the patient	B-15	Go to Section E
(+2)	B-16	Develop a plan to manage the patient's problem.	B-16	Go to Section G

Section C

Uncover the information below and then proceed. (Latent image) The patient returns two days later because her symptoms have worsened.

What should your next action be? (Choose only ONE action from the list below.)

(+2)	C-1	Obtain an interval history from the patient.	C-1	Go to Section M
(+1)	C-2	Examine the patient	C-2	Go to Section L
(-2)	C-3	Order diagnostic studies	C-3	Go to Section J
(-4)	C-4	Develop a plan for managing the patient's problem.	C-4	Go to Section K

Section D

Uncover the information immediately below and then proceed. (Latent image)

Review of the medical record shows that the patient was treated for iron deficiency anemia two years ago. The cause was presumed to be excessive menstrual flow.

Section D (Cont.)

What should your next action be? (Choose only ONE of the following and choose an action that you have NOT already taken.)

(+1)	D-1	Obtain a history from the patient.	D-1	Go to Section H
(+2)	D-2	Examine the patient	D-2	Go to Section E
(-1)	D-3	Obtain diagnostic studies	D-3	Go to Section B
(-2)	D-4	Develop a plan for managing the patient's problem.	D-4	Go to Section G

Section E

Choose the area(s) of the physical exam that is (are) pertinent. (You may choose MORE than one if you wish.)

(+1)	E-1	General appearance	E-1	Well nourished, white female in no acute distress.
(+1)	E-2	Vital signs	E-2	T 99^{2o}F (37.3°C); P 90 reg; R 16 reg; BP 110/60
(+1)	E-3	Head and neck examination	E-3	Sclera are white. Head and neck exam is normal.
(-1)	E-4	Chest examination	E-4	Inspect - normal Palpate - normal Percuss - normal Auscultate - normal
(-1)	E-5	Cardiac examination	E-5	Inspect - normal Palpate - normal Auscultate - normal
(+2)	E-6	Abdominal examination	E-6	Inspect - normal Auscultate - normal Percuss - Tenderness over right lower costal area; liver height normal. Palpate - No palpable masses; slight right upper quadrant tenderness on vigorous palpation.

Section E (Cont.)

(-2)	E-7	Upper extremities	E-7	Pulses normal; no cyanosis or clubbing.
(-2)	E-8	Lower extremities	E-8	Pulses normal; no edema.
(-1)	E-9	Genitalia and rectal	E-9	Negative manual examination; stool gray-tan colored.
(-2)	E-10	Lymph node examination	E-10	Negative
(-2)	E-11	Neurologic examination	E-11	Negative

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken.)

(-2)	E-12	Obtain a history from the patient.	E-12	Go to Section H
(+1)	E-13	Review the patient's medical record.	E-13	Go to Section D
(+2)	E-14	Order diagnostic studies	E-14	Go to Section B
(-3)	E-15	Develop a plan to manage the patient's problem.	E-15	Go to Section G

Section F

(All of the responses below are latent images.)

F-1 After reviewing the history and physical examination, and the results of the serum transaminase (SGOT), the patient is admitted to the hospital, and is placed on stool, urine, and needle precautions for infectious hepatitis. This is the end of the problem.

F-2 The patient is admitted and is placed on stool, urine and needle precautions for infectious hepatitis. Her hopsital stay is uneventful. This is the end of the problem.

F-3 The patient is admitted and is placed on stool, urine and needle precautions for infectious hepatitis. Her condition initially worsens, and then gradually improves until discharge two weeks later. This is the end of the problem.

F-4 The patient demands to see a physician. On the basis of the history, physical examination, and serum transaminase (SGOT), she is admitted and placed on stool, urine, and needle precautions for infectious hepatitis. This is the end of the problem.

Section G

The PRIMARY component of your plan should be: (Choose only ONE of the following.)

(-7)	G-1	Send the patient home and tell her to return immediately if her symptoms worsen.	G-1	Go to Section C
(-1)	G-2	Schedule the patient for internal medicine clinic that afternoon.	G-2	Go to Section F and uncover image F-1.
(+2)	G-3	Admit the patient for observation and isolation precautions.	G-3	Go to Section F and uncover image F-2
(+1)	G-4	Obtain further diagnostic studies.	G-4	Go to Section I
(-3)	G-5	Refer the patient to surgery for evaluation of her abdominal pain.	G-5	Go to Section F image F-1

Section H

The following areas may be probed. Choose the one(s) that you feel is (are) pertinent. (You may choose MORE than one.)

(+2)	H-1	What is the duration of the problem?	H-1	The symptoms started about two days ago.
(+1)	H-2	Has the patient traveled recently?	H-2	The patient returned from a vacation trip to a small village in Mexico four weeks ago.
(-2)	H-3	Is there a history of allergies?	H-3	No
(-2)	H-4	Is cough present?	H-4	No
(+2)	H-5	What was the nature of the onset?	H-5	Symptoms came on gradually, and have gradually worsened.
(+2)	H-6	Is there any abdominal pain?	H-6	For the past 24 hours there has been nagging right upper quadrant aching.
(+1)	H-7	Has the patient received any recent medications or seen a doctor recently?	H-7	She has received no oral or parental medications and has not seen a physician recently.

Section H (Cont.)

(+1)	H-8	Has there been any change urination?	H-8	The patient has noted darker urine for the past day.
(-2)	H-9	Is there a history of seizures during childhood?	H-9	No
(-2)	H-10	Is there a history of emotional problems?	H-10	No
(+2)	H-11	Has there been any changes in appetite?	H-11	The patient has not felt like eating. In fact, the sight of food makes her nauseous.
(-1)	H-12	Does the patient smoke?	H-12	She is a pack-a-day smoker, but has lost her taste for smoking because the cigarettes "don't taste right."
(-2)	H-13	Is there a history of joint disease or prior trauma?	H-13	The patient had a broken femur in an auto accident as a child, but it healed without sequellae.

What should your next action be? (Choose only ONE and choose an action that you have NOT already taken.)

(+2)	H-14	Review the patient's medical record.	H-14	Go to Section D
(+1)	H-15	Examine the patient.	H-15	Go to Section E
(-1)	H-16	Order diagnostic studies	H-16	Go to Section B
(-3)	H-17	Develop a plan to manage the patient's problem.	H-17	Go to Section G

Section I

The following studies may be obtained. Choose the one(s) that you feel is (are) important. (You may choose MORE than one if you wish.)

(-2)	I-1	Lung scinti-scan	I-1	Lung scan normal
(-2)	I-2	Skull x-rays	I-2	Skull x-rays normal
(-1)	I-3	Liver spleen scinti-scan	I-3	Poor hepatic uptake, but otherwise normal.

What should your next action be? (Choose only ONE of the following, and select an action that you have NOT already taken since the patient's return.)

(-2)	J-13	Obtain a history from the patient.	J-13	Go to Section M
(-1)	J-14	Examine the patient	J-14	Go to Section L
(+2)	J-15	Develop a plan to manage the patient's problem.	J-15	Go to Section K

Section K

The PRIMARY component of your plan should be: (Choose only ONE of the following.)

(-1)	K-1	Send the patient to internal medicine clinic on an urgent referral for that afternoon.	K-1	Go to Section F and uncover image F-3
(+1)	K-2	Admit the patient for further observation and for isolation precautions.	K-2	Go to Section F and uncover image F-2
(-2)	K-3	Send the patient home with instructions for strict bed rest. Compazine is prescribed for nausea.	K-3	Go to Section F and uncover image F-4
(-1)	K-4	Send the patient to surgery clinic on an urgent referral for that afternoon.	K-4	Go to Section F and uncover image F-3

Section L

From the following components of the physical examination, choose the one(s) that is (are) important. (You may choose MORE than one if you wish.)

(0)	L-1	General appearance	L-1	Sallow appearing, obviously ill, white female.
(0)	L-2	Vital signs	L-2	T $99^{2}{}^{o}$F (37.3°C) P 88 reg; R 18 reg BP 110/65

Section L (Cont.)

(0)	L-3	Head and neck examination	L-3	Sclera are yellow. Head and neck exam is otherwise normal.
(-1)	L-4	Chest examination	L-4	Inspect - normal Palpate - normal Percuss - normal Auscultate - normal
(-1)	L-5	Cardiac examination	L-5	Inspect - normal Palpate - negative Auscultate - negative
(0)	L-6	Abdominal examination	L-6	Inspect - no bulges Auscultate - bowel sounds normal Percuss - right lower costal marginal tenderness Palpate - firm tender liver edge felt 2 cm below the right costal margin.
(-2)	L-7	Examination of the upper extremities	L-7	Pulses normal. No cyanosis
(-2)	L-8	Examination of the lower extremities	L-8	Pulses normal. No edema
(0)	L-9	Genitalia and rectal examination	L-9	Negative - no stool obtained.
(-1)	L-10	Lymph node examination	L-10	Negative
(-2)	L-11	Neurologic examination	L-11	Mental status - normal Cranial nerves - normal Sensory - normal

What should your next action be? (Choose only ONE and choose an action that you have NOT already taken since the patient's return.)

(-1)	L-12	Obtain a history from the patient.	L-12	Go to Section M
(+2)	L-13	Order diagnostic studies	L-13	Go to Section J
(-3)	L-14	Develop a plan to manage the patient's problem.	L-14	Go to Section K

Section I (Cont.)

(+2)	I-4	Hepatitis-associated antigen	I-4	Negative
(-2)	I-5	Tuberculosis skin test	I-5	Nonreactive
(-1)	I-6	Gall bladder x-ray	I-6	Poor visualization
(+2)	I-7	Direct and indirect reacting bilirubin fractions	I-7	Direct-reacting bilirubin 2.0 mg%
(-2)	I-8	Sputum smear for acid-fast bacilli (AFB)	I-8	Negative
(-2)	I-9	Spirometry	I-9	Negative

Uncover the image below.

(Latent image) Return to Section G and select another action.

Section J

The following studies may be obtained. Choose the one(s) that you feel is(are) important. (You may choose MORE than one if you wish.)

(-1)	J-1	Complete blood count	J-1	Hct 38; Hgb 13, WBC/500
(-2)	J-2	PA and Lateral chest x-ray	J-2	PA and lateral chest x-rays - negative
(-2)	J-3	Upper GI series (barium swallow)	J-3	The patient vomited the barium. The test could not be completed.
(-2)	J-4	EkG	J-4	Normal sinus rhythm
(-2)	J-5	Barium enema	J-5	Isolated colonic diverticulum noted
(0)	J-6	Transaminase (SGOT)	J-6	810 units (normal 6-20)
(-2)	J-7	Arterial blood gases	J-7	Pa_{O_2} 90mmHg Pa_{CO_2} 36mmHg pH 7.38
(0)	J-8	Alkaline phosphatase	J-8	230 units (normal 55-239
(0)	J-9	Urinalysis	J-9	Brown foam on shaking. Otherwise negative
(0)	J-10	Serum Bilirubin	J-10	6.2 mg% (normal 1.5mg%)
(0)	J-11	Serum amylase	J-11	58 units (normal 30-180)
(-2)	J-12	Creatine phosphokinase	J-12	16 units (normal 0-65)

Section M

The following areas may be probed. Choose the one(s) that you feel is (are) pertinent. (You may choose MORE than one if you wish.)

(0)	M-1	Is there any abdominal pain?	M-1	There is a vague ache in the right upper quadrant.
(-1)	M-2	Is there any dysuria?	M-2	No
(-2)	M-3	Is cough present?	M-3	No
(0)	M-4	Has there been any change in appetite?	M-4	The sight of food makes her nauseous.
(0)	M-5	Has there been any fever?	M-5	No
(-1)	M-6	Has there been any headache?	M-6	No
(0)	M-7	Is there any change in bowel movements?	M-7	Bowel movements are decreased in frequency, but are otherwise unremarkable.

What should your next action be? (Choose only ONE and choose an action that you have NOT already selected since the patient's return.)

(2)	M-8	Examine the patient	M-8	Go to Section L
(-1)	M-9	Order diagnostic studies	M-9	Go to Section J
(-3)	M-10	Develop a plan to manage the patient's problem.	M-10	Go to Section K